



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,531	08/25/2003	Stuart Cain	200310063-1	4467
22879 7590 08/21/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER ALMEIDA, DEVIN E	
			ART UNIT 2132	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/648,531	CAIN, STUART	
	Examiner	Art Unit	
	Devin Almeida	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the papers filed 2/26/2007. Claims 1-20 were received for consideration.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-7, 9, 10, 12-16, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Fox et al (U.S. 6,535,227). Fox teaches everything with respect to claim 1, a security indication spanning tree method comprising: determining asset value of a network node (see abstract and column 3 lines 34-59); ascertaining exposure rating of said network node (see abstract and column 3 lines 34-59); establishing a functional priority risk indicator for indicating the likelihood of an attack from another network node (see abstract and column 3 lines 34-59); and creating a spanning tree schematic of a

network including said network node, wherein said spanning tree schematic includes an indication of said asset value (see abstract and figure 7, 9 and 10).

With respect to claim 2, wherein said spanning tree schematic includes an indication of said exposure rating (see abstract and figure 7, 9 and 10).

With respect to claim 3, wherein said spanning tree schematic includes an indication of said attack risk (see column 1 lines 31-58).

With respect to claim 4, wherein said asset value provides an indication of an economic value of functions provided by said network node (see column 1 lines 31-58).

With respect to claim 5, said asset value corresponds to an economic impact of a disruption to functionality provided by said network node (see column 1 lines 31-58).

With respect to claim 6, a security indication spanning tree method of claim 1 wherein said exposure rating defines a threshold value corresponding to connectivity of the network node with other network nodes (see abstract and figure 7, 9 and 10 and column 9 line 20-25).

With respect to claim 7, wherein said network node is given an exposure rating value based upon a connectivity distance from a root node (see column 9 lines 20-25).

With respect to claim 8, wherein said root node is a node closest to an external network (see figure 1).

With respect to claim 9, wherein said functional priority risk indicator is associated with an economic benefit and utility of functionality said network node provides (see column 1 lines 31-58).

With respect to claim 10, a security indication spanning tree system comprising: a bus for communicating information; a processor coupled to said bus (see column 5 lines 35 –51 it is inherent that a computer has a processor), said processor for processing said information including instructions for building an attack impact susceptibility spanning tree representation including asset value factors (see column 5 lines 35 -51); and a memory coupled to said bus, said memory for storing said information (see column 5 lines 35 –51 it is inherent that a computer has a memory), including instructions for building said attack impact susceptibility spanning tree representation including said asset value factors (see abstract, figure 7, 9 and 10 and column 3 lines 34-59).

With respect to claim 11, wherein said asset risk value is automatically determined (see column 5 lines 35 -51).

With respect to claim 12, further comprising a central console for interfacing with a network application management platform (see Abstract and column 5 lines 35 –51).

With respect to claim 13, wherein said instructions include attack spread risk determination instructions (see column 1 lines 31-58).

With respect to claim 14, wherein said instructions include exposure rating determination directions (see figure 3 and column 5 lines 35 – column 6 lines 51 and column 7 line 28 – column 8 line 6).

With respect to claim 15, a computer usable storage medium having computer readable program code embodied therein for causing a computer system to implement security indication spanning tree instructions comprising: a device examination module

for examining information regarding devices included in a centralized resource network, wherein said examining includes ascertaining what applications said devices support; an importance indication module for obtaining an indication of a relative importance of functionality provided by said device (see column 5 lines 35 –51 and column 7 line 28 – column 8 line 6); and a spanning tree module for building a spanning tree topology representation including said indication of said relative importance of said device in supporting said applications (see abstract, figure 7, 9 and 10 and column 3 lines 34-59).

With respect to claim 16, herein said relative importance of said device is based upon an economic value of functions said devices performs in support of said applications (see column 1 lines 31-58).

With respect to claim 19, further comprising an attack danger assessment module for assessing the danger of an attack from other devices included in said network (see column 1 lines 31-58).

With respect to claim 20, further comprising: deriving an attack danger indication based upon said indication of said relative importance of said device and said connectivity threshold value; and associating said attack danger indication with said device (see column 1 lines 31-58).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2132

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fox et al (U.S. 6,535,227) in view of Burrows et al (U.S. 2002/0073338). Fox teaches everything with respect to claim 15 but with respect to claim 17 Fox does not teach further comprising an internal attack permeability module for investigating the permeability of a network in permitting an internal attack on a device from other devices included in the network. 17. Burrows an internal attack permeability module for investigating the permeability of a network in permitting an internal attack on a device from other devices included in the network (see Burrows paragraph 0040-0041). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Fox with the method of Burrows to diffuse attack from a first component to a second component in the network in order to mitigate the effects of undesirable behavior on the network, as taught by Burrows (see Burrows paragraph 0028]).

With respect to claim 18 wherein said investigating includes: analyzing the ease of attack on said device from other devices in said centralized resource network; and assigning an connectivity threshold value to said device based upon said analysis of said ease of attack (see Burrows paragraph 0040-0041).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devin Almeida whose telephone number is 571-270-

Art Unit: 2132

1018. The examiner can normally be reached on Monday-Thursday from 7:30 A.M. to 5:00 P.M. The examiner can also be reached on alternate Fridays from 7:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron, can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DA

Devin Almeida
Patent Examiner
8/15/2007



GILBERTO BARRON JR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100